



Strip Disking



Strip disking is one of the simplest, most effective, and least expensive techniques for improving wildlife habitat. Quail, pheasant, turkey, rabbits, songbirds and deer are some of the wildlife species that may benefit. Strip disking involves the use of a disk, or what is sometimes referred to as a harrow, to disturb the soil. Disking as a means of wildlife habitat improvement provides numerous benefits. It sets back natural succession by cutting up grassy vegetation, thus preventing an area from maturing into briars, shrubs, and trees. It can eliminate or reduce a thick mat or carpet of grass, such as fescue, brome, or reed canary grass, which is a barrier to movement and feeding for many wildlife species. Disking also encourages the natural re-vegetation of annual grasses and forbs (native broadleaf plants) that are a major wildlife food source and provide important brood rearing habitat, rich in insects. When the soil is exposed, seeds of annual plants can germinate and grow, adding plant diversity. Many of these annual plants produce seeds or leafy material that provide food and cover during various times of the year. Strip disking even creates areas of bare soil that provide dusting areas for birds or for sowing additional types of seeds valuable as wildlife food and cover. **Strip disking is most often used along woodland edges or on large tracts of grassland where there is little or no cropland edge that would typically provide the benefits listed above.** Strip disking simply involves the purposeful disturbance of the soil to release sod-bound fields, reduce litter accumulation, create bare ground, stimulate germination of desirable seed-producing plants, and increase insect populations for birds to feed upon.

Strip disking should be done in long, linear strips (at least 15 feet in width). To prevent erosion, strips should follow the contour of the land and be separated by undisked strips 2-3 times the width of the disked area. The ground is simply disked deep enough to kill the majority of the existing vegetation (3-4 inches in depth is usually adequate). If the grass is too dense to allow adequate soil disturbance with a disk, then burning, flash grazing, haying, plowing, or any combination can be used to remove the thick mat of vegetation prior to strip disking.

During the first year after disking, heavy seed-producing plants, such as foxtail, ragweed, and Korean lespedeza (in southern Indiana) will quickly volunteer into the disturbed soil areas and provide high-energy, winter food supplies and attract insects for birds to feed upon. The disked areas will be open enough at ground level for easy movement by quail broods and other small wildlife, and provide dusting sites for birds to rid themselves of external parasites.

During the second and third year after disking, perennial forbs, legumes and grasses will begin to become established. The amount of bare ground, interspersed among the erect vegetation, begins to decline. The young leaves of perennial forbs and legumes provide an important source of nutrients for adult birds and rabbits prior to the initiation of nesting. Annual plants are still abundant and continue to provide rich sources of insects and winter foods. This stage of succession provides important loafing and roosting habitat for quail and pheasants.

During the fourth and fifth year after disking, the seed-producing annuals decline rapidly. Grasses and forbs dominate the area and dead litter begins to accumulate, covering most remaining bare ground. Briars, and shrub and tree seedlings begin to invade the area. At this stage of succession, the habitat conditions for quail, pheasant, rabbit and turkey nesting have peaked and may be on the decline.



Figure 1. Fields divided into strips for strip disking on a five-year rotation.

From the above descriptions of succession, one can see that **it is important for all of these stages to be available each year to maximize wildlife habitat and the production of young wildlife.** Food, cover, and nesting habitat must be available simultaneously. In order to achieve this goal, strip disking should be set up on a rotational basis (Figure 1), so that as one or more strips reach nesting habitat maturity, other strips are in the beginning or intermediate stages of succession. Depending on the fertility of your land, **strips should be set up on a 4-6 year rotation to maximize wildlife habitat availability.**

Disks are made in three basic styles: 1) A pick-up disk is one that is raised or lowered by the 3-point connection (hitch) on the tractor. 2) A wheeled disk is equipped to ride on tires and is raised by hydraulic cylinders attached to the wheels. 3) A drag disk cannot be picked up off the ground, which makes transportation of the disk difficult. If you are mainly doing wildlife habitat work, a suitable setup is a pick-up disk, 6 to 8 feet wide, and pulled by a 20 to 40 horsepower tractor. Disks narrower than 6 feet may not be heavy enough to cut through thick sod and into the soil. Disks wider than 8 feet may be difficult to transport, especially along narrow farm lanes and woodland trails. If you don't have your own equipment, you can generally rent the equipment from a local farm supply store, contract the equipment and/or labor from a local farmer, or borrow it from a friend.

Strip disking can be a very effective and inexpensive tool for developing and maintaining wildlife habitat. Always be sure to place disked strips in close proximity to adequate cover. The edges of warm season grass (prairie grass) plantings, crop fields, shrub plantings, brushy fence rows, woodlands, food plots, and wildlife corridors are excellent locations. Strip disking is most beneficial when conducted during late summer or early fall. At this time of the year, soils are normally dry, the activity does not interfere with nesting, and it produces a lush stand of annuals the following spring.

Light strip disking is also an approved practice for use on Conservation Reserve Program (CRP) lands that have lost their vegetative diversity and wildlife value. Examples of fields that can benefit from light strip disking are solid or thick stands of fescue, brome, or orchard grass. Light strip disking on CRP lands can only be conducted outside the nesting period of March 1 through July 15 and in such a manner so that soil loss does not exceed tolerable limits. Disking should be done in a manner that provides 40% -70% bare soil, equally distributed throughout the area of disturbance. Disked strips must be 30-50 feet in width, and alternated with undisturbed strips 3-4 times the effected width, following the contour of the land. Areas of undisturbed vegetation (filter strip) must be left adjacent to all water bodies to maintain water quality. Light strip disking is also an excellent tool for inter-seeding legumes or forbs into existing CRP fields that have lost their legume component. Landowners of CRP acreage should always make sure their Conservation Plan has been modified to include the strip disking option and always obtain USDA approval prior to conducting any disking or inter-seeding on USDA program lands. Light discing on CRP ground should be done according to Indiana NRCS Conservation Practice Standard 647, *Early Successional Habitat Development/Management*. To modify your Conservation Plan, obtain practice approval or acquire a copy of the Conservation Practice Standard 647, visit your local Natural Resources Conservation Service (NRCS) office.

Related *Habitat Management Fact Sheets*:

Strip Mowing
Woodland Edge Enhancement
Grain Food Plots

Legume Food Plots
Legume Interseeding
Natural Regeneration

Prepared by the Indiana Department of Natural Resources, Division of Fish and Wildlife. For up-to-date information concerning the Indiana Division of Fish and Wildlife, or for information on the location of your District Wildlife Biologist, visit our website at www.state.in.us/dnr/fishwild/index2.htm

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